ABSTRACT OF THE DISCLOSURE

[0038] A protection domain for a set of errors is defined using an association between data and first integrity metadata to protect data traversing an input/output datapath. The datapath has a storage device as one endpoint and a first generation integrity point for a host as an opposite endpoint. A first sub-domain is defined within the protection domain using an association between the data and second integrity metadata to further protect a portion of the datapath having a second generation integrity point as one endpoint. In another aspect, a second sub-domain is defined within the protection domain using an association between the data and third integrity metadata further protect data traversing a portion of the datapath having a third generation integrity point as one endpoint. The first and second sub-domains are nested within the protection boundary and may be in a hierarchical relationship.